

Machine Tool (Metal Forming Types) Manufacturing: 2002

Issued January 2005

EC02-311-333513 (RV)

2002 Economic Census

Manufacturing

Industry Series



USCENSUSBUREAU

Helping You Make Informed Decisions

U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU



CONTENTS

Introduction to the Economic Census	v
Manufacturing	ix

Tables

1. Historical Statistics for the Industry: 2002 and Earlier Years ...	1
2. Industry Statistics for Selected States: 2002	2
3. Detailed Statistics by Industry: 2002	3
4. Industry Statistics by Employment Size: 2002.....	4
5. Industry Statistics by Primary Product Class Specialization: 2002	5
6a. Products Statistics: 2002 and 1997	6
6b. Product Class Shipments for Selected States: 2002 and 1997 .	7
7. Materials Consumed by Kind: 2002 and 1997.....	8

Appendixes

A. Explanation of Terms	A-1
B. NAICS Codes, Titles, and Descriptions	B-1
C. Methodology	C-1
D. Geographic Notes	--
E. Metropolitan and Micropolitan Statistical Areas	--
F. Comparability of Product Classes and Product Codes: 2002 to 1997	F-1

-- Not applicable for this report.

Table 1. Historical Statistics for the Industry: 2002 and Earlier Years

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry and year ¹	Com- panies ²	All estab- lish- ments ³	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expendi- tures (\$1,000)	
			Number ⁴	Payroll (\$1,000)	Number ⁴	Hours (1,000)	Wages (\$1,000)					
333513, Machine tool (metal forming types) manufacturing	2002..	169	178	7 262	341 180	4 186	8 399	174 034	637 813	479 714	1 117 399	'28 634
	2001..	N	N	11 660	504 362	7 154	14 798	269 582	960 485	758 445	1 784 936	36 819
	2000..	N	N	13 310	598 408	8 622	17 957	335 652	1 248 095	938 389	2 169 364	54 244
	1999..	N	N	13 529	596 008	8 723	18 007	329 977	1 274 523	909 853	2 190 749	68 134
	1998..	N	N	15 154	640 710	9 578	19 016	364 273	1 439 622	951 104	2 308 868	102 898
	1997..	219	224	14 141	596 804	9 092	18 745	344 827	285 781	958 357	2 247 954	92 014

¹Statistics presented for years ending in 2 and 7 are census data. Interim census years are derived in a representative sample of manufacturing establishments canvassed in the Annual Survey of Manufactures (ASM).

²For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

³Includes establishments with payroll at any time during the year.

⁴Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 2. Industry Statistics for Selected States: 2002

[States that are a disclosure or with less than 100 employees are not shown. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by *, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E ¹	All establishments ²		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
		Total	With 20 employees or more	Number ³	Payroll (\$1,000)	Number ³	Hours (1,000)	Wages (\$1,000)				
333513, Machine tool (metal forming types) manufacturing												
United States	—	178	98	7 262	341 180	4 186	8 399	174 034	637 813	479 714	1 117 399	28 634
California	1	14	5	360	15 599	201	391	7 220	29 203	23 978	53 658	926
Illinois	—	14	8	584	30 766	310	648	13 556	57 072	44 522	100 148	4 838
Indiana	—	9	3	149	6 096	93	167	2 995	12 148	6 444	19 985	328
Massachusetts	2	8	5	263	12 875	184	390	7 826	23 330	14 846	38 482	1 325
Michigan	—	26	14	1 173	57 551	710	1 484	32 168	113 407	71 457	179 137	6 487
Missouri	—	6	2	153	6 430	89	148	3 060	11 238	7 052	18 810	164
New York	4	10	5	401	18 451	201	431	7 772	31 891	28 185	63 066	1 826
Ohio	—	20	14	1 684	86 020	888	1 723	44 654	129 697	107 500	248 765	3 329
Pennsylvania	—	12	9	473	20 503	241	473	8 796	34 251	24 701	62 593	4 763

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Includes establishments with payroll at any time during the year.

³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

Table 3. Detailed Statistics by Industry: 2002

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Item	Value
333513, Machine tool (metal forming types) manufacturing	
Companies ¹	number.. 169
All establishments ²	number.. 178
Establishments with 1 to 19 employees	number.. 80
Establishments with 20 to 99 employees	number.. 84
Establishments with 100 employees or more	number.. 14
All employees ³	number.. 7 262
Total compensation	\$1,000.. 418 993
Annual payroll	\$1,000.. 341 180
Total fringe benefits	\$1,000.. 77 813
Production workers, average for year	number.. 4 186
Production workers on March 12	number.. 4 202
Production workers on May 12	number.. 4 252
Production workers on August 12	number.. 4 149
Production workers on November 12	number.. 4 131
Production worker hours	1,000.. 8 399
Production worker wages	\$1,000.. 174 034
Total cost of materials	\$1,000.. 479 714
Materials, parts, containers, packaging, etc., used	\$1,000.. 398 662
Resales	\$1,000.. 44 470
Purchased fuels	\$1,000.. 2 998
Purchased electricity	\$1,000.. 7 188
Contract work	\$1,000.. 26 396
Quantity of electricity purchased for heat and power	1,000 kWh.. 110 568
Quantity of electricity generated less sold for heat and power	1,000 kWh.. -
Total value of shipments	\$1,000.. 1 117 399
Primary products value of shipments	\$1,000.. 949 095
Secondary products value of shipments	\$1,000.. 66 642
Total miscellaneous receipts	\$1,000.. 101 662
Value of resales	\$1,000.. 60 207
Contract receipts	\$1,000.. 7 927
Other miscellaneous receipts	\$1,000.. 33 528
Primary products specialization ratio	percent.. 93
Value of primary products shipments made in all industries	\$1,000.. 1 146 728
Value of primary products shipments made in this industry	\$1,000.. 949 095
Value of primary products shipments made in other industries	\$1,000.. 197 633
Coverage ratio	percent.. 83
Value added	\$1,000.. 637 813
Total inventories, beginning of year	\$1,000.. 254 835
Finished goods inventories	\$1,000.. 100 258
Work-in-process inventories	\$1,000.. 95 078
Materials and supplies inventories	\$1,000.. 59 899
Total inventories, end of year	\$1,000.. 249 070
Finished goods inventories	\$1,000.. 91 789
Work-in-process inventories	\$1,000.. 103 675
Materials and supplies inventories	\$1,000.. 53 606
Gross value of depreciable assets (acquisition costs) at beginning of year	\$1,000.. '534 608
Total capital expenditures (new and used)	\$1,000.. '28 634
Buildings and other structures (new and used)	\$1,000.. '4 276
Machinery and equipment (new and used)	\$1,000.. '24 358
Automobiles, trucks, etc., for highway use	\$1,000.. '2 355
Computers and peripheral data processing equipment	\$1,000.. '3 170
All other expenditures for machinery and equipment	\$1,000.. '18 833
Total retirements	\$1,000.. '34 113
Gross value of depreciable assets at end of year	\$1,000.. '529 129
Depreciation charges during year	\$1,000.. '31 839
Total rental payments	\$1,000.. 18 183
Buildings and other structures	\$1,000.. 12 917
Machinery and equipment	\$1,000.. 5 266
Total other expenses ⁴	\$1,000.. 64 041
Response coverage ratio ⁵	percent.. 73
Repair and maintenance services of buildings and/or machinery ⁴	\$1,000.. 6 144
Communications services ⁴	\$1,000.. 3 322
Legal services ⁴	\$1,000.. 2 490
Accounting, auditing, and bookkeeping services ⁴	\$1,000.. 1 698
Advertising and promotional services ⁴	\$1,000.. 5 013
Expensed computer hardware and supplies and purchased computer services ⁴	\$1,000.. 1 324
Refuse removal (including hazardous waste) services ⁴	\$1,000.. 574
Management consulting and administrative services ⁴	\$1,000.. 2 133
Taxes and license fees ⁴	\$1,000.. 2 619
All other expenses ⁴	\$1,000.. 38 723

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

²Includes establishments with payroll at any time during the year.

³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

⁴Based on 2002 Annual Survey of Manufactures (ASM) sample data.

⁵A response coverage ratio is derived for this item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight) for those Annual Survey of Manufactures (ASM) establishments that reported to the weighted total employment for all ASM establishments classified in this industry.

Note 1: The amounts shown for other expenses reflect only those services that establishments purchase from other companies.

Note 2: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 4. Industry Statistics by Employment Size: 2002

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Employment size class	E ¹	All establishments ²	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number ³	Payroll (\$1,000)	Number ³	Hours (1,000)	Wages (\$1,000)				
333513, Machine tool (metal forming types) manufacturing											
All establishments	—	178	7 262	341 180	4 186	8 399	174 034	637 813	479 714	1 117 399	'28 634
Establishments with—											
1 to 4 employees	6	14	38	1 498	23	40	774	3 215	2 600	6 234	'110
5 to 9 employees	2	18	135	4 841	82	135	2 618	11 267	8 440	19 762	'1 135
10 to 19 employees	1	48	668	28 890	424	720	14 309	58 012	42 791	99 528	'2 767
20 to 49 employees	1	58	1 751	75 880	1 076	2 189	39 668	151 021	134 537	286 116	'8 235
50 to 99 employees	1	26	1 831	85 769	1 089	2 293	43 801	162 762	133 355	289 376	'5 075
100 to 249 employees	—	11	1 628	81 767	826	1 688	37 500	159 614	98 948	253 130	'6 002
250 to 499 employees	—	2	f	D	D	D	D	D	D	D	D
500 to 999 employees	—	1	f	D	D	D	D	D	D	D	D
1,000 to 2,499 employees	—	—	—	—	—	—	—	—	—	—	—
2,500 employees or more	—	—	—	—	—	—	—	—	—	—	—
Administrative records ⁴	9	1	a	D	D	D	D	D	D	D	D

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Includes establishments with payroll at any time during the year.

³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

⁴Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 5. Industry Statistics by Primary Product Class Specialization: 2002

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry or product class code	Industry or primary product class	All establishments ¹	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number ²	Payroll (\$1,000)	Number ²	Hours (1,000)	Wages (\$1,000)				
333513	Machine tool (metal forming types) manufacturing	178	7 262	341 180	4 186	8 399	174 034	637 813	479 714	1 117 399	'28 634
3335131	Metal punching and shearing machines (including power and manual) and bending and forming machines (power only)	42	2 176	100 322	1 318	2 815	52 254	195 290	162 965	363 474	'9 090
3335133	Metalworking presses (except forging and die-stamping presses) .	24	1 400	71 522	743	1 573	35 759	130 531	103 462	240 270	'7 365
3335135	Other metal forming machine tools, including forging and die-stamping machines (except metalworking presses)	31	1 381	63 763	804	1 515	31 924	138 903	87 702	210 366	'2 511
3335137	Parts for metal forming machine tools (sold separately), including rebuilt and remanufactured metal forming machine tools	34	1 411	64 080	799	1 427	33 919	99 785	73 190	179 256	'6 079

¹Includes establishments with payroll at any time during the year.

²Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 6a. **Products Statistics: 2002 and 1997**

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)
333513	Machine tool (metal forming types) manufacturing	2002.. N 1997.. N	X X	X X	1 146 728 2 183 182
3335131	Metal punching and shearing machines (including power and manual) and bending and forming machines (power only)	2002.. N 1997.. N	X X	X X	351 477 601 050
33351311	Metal punching and shearing machines (including power and manual) and bending and forming machines (power only)	2002.. N 1997.. N	X X	X X	351 477 601 050
3335131100	Metal punching and shearing machines (including power and manual) and bending and forming machines (power only) ¹	2002.. 69 1997.. 97	X X	X X	351 477 601 050
3335133	Metalworking presses (except forging and die-stamping presses)	2002.. N 1997.. N	X X	X X	204 742 431 087
33351331	Metalworking presses (except forging and die-stamping presses)	2002.. N 1997.. N	X X	X X	204 742 431 087
3335133100	Metalworking presses (except forging and die-stamping presses) ¹	2002.. 38 1997.. 50	X X	X X	204 742 431 087
3335135	Other metal forming machine tools, including forging and die-stamping machines (except metalworking presses)	2002.. N 1997.. N	X X	X X	228 434 590 966
33351351	Other metal forming machine tools, including forging and die-stamping machines (except metalworking presses)	2002.. N 1997.. N	X X	X X	228 434 590 966
3335135100	Other metal forming machine tools, including forging and die-stamping machines (except metalworking presses) ¹	2002.. 65 1997.. 107	X X	X X	228 434 590 966
3335137	Parts for metal forming machine tools (sold separately), including rebuilt and remanufactured metal forming machine tools	2002.. N 1997.. N	X X	X X	242 298 488 719
33351371	Parts for metal forming machine tools (sold separately), die-casting machines, rebuilt metal forming machine tools, and remanufactured metal forming machine tools	2002.. N 1997.. N	X X	X X	234 356 486 453
3335137101	Parts for die-casting machines	2002.. 16 1997.. 12	X X	X X	27 002 13 570
3335137111	Other parts for metal forming machine tools	2002.. 56 1997.. 91	X X	X X	182 688 425 487
3335137117	Rebuilt metal forming machine tools (including machines returned to same configuration they were in when new from factory)	2002.. 12 1997.. N	X X	X X	9 795 N
3335137121	Remanufactured metal forming machine tools (including machines in which the basic carcass is reused and all possible modern improvements have been incorporated) ¹	2002.. 10 1997.. N	X X	X X	14 871 N
3335137Y	Parts for metal forming machine tools (sold separately), rebuilt metal forming machine tools, and remanufactured metal forming machine tools, nsk	2002.. N 1997.. N	X X	X X	7 942 2 266
3335137YV	Parts for metal forming machine tools (sold separately), rebuilt metal forming machine tools, and remanufactured metal forming machine tools, nsk	2002.. N 1997.. N	X X	X X	7 942 2 266
333513W	Machine tool (metal forming types) manufacturing, nsk, total	2002.. N 1997.. N	X X	X X	119 777 71 360
333513WY	Machine tool (metal forming types) manufacturing, nsk, total	2002.. N 1997.. N	X X	X X	119 777 71 360
333513WYWW	Machine tool (metal forming types) manufacturing, nsk, for nonadministrative-record establishments	2002.. N 1997.. N	X X	X X	119 777 71 360
333513WYWY	Machine tool (metal forming types) manufacturing, nsk, for administrative-record establishments	2002.. N 1997.. N	X X	X X	— —

¹For additional detail, see Current Industrial Report MQ333W, Metalworking Machinery.

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p—10 to 19 percent estimated; q—20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 6b. Product Class Shipments for Selected States: 2002 and 1997

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 2002. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographic definitions, see note at end of table. For information on geographic areas followed by *, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS product class code	Product class and geographic area	Value of product shipments (\$1,000)
3335131	Metal punching and shearing machines (including power and manual) and bending and forming machines (power only)	
	United States..... 2002..	351 477
	..... 1997..	601 050
	Illinois 2002..	30 484
	..... 1997..	119 080
	Michigan..... 2002..	44 372
	..... 1997..	76 036
	Ohio 2002..	35 633
	..... 1997..	76 126
3335133	Metalworking presses (except forging and die-stamping presses)	
	United States..... 2002..	204 742
	..... 1997..	431 087
	California 2002..	13 093
	..... 1997..	N
	Michigan..... 2002..	29 481
	..... 1997..	34 986
	Ohio 2002..	78 258
	..... 1997..	128 116
	Pennsylvania..... 2002..	22 062
	..... 1997..	25 417
3335135	Other metal forming machine tools, including forging and die-stamping machines (except metalworking presses)	
	United States..... 2002..	228 434
	..... 1997..	590 966
	California 2002..	7 156
	..... 1997..	24 701
	Illinois 2002..	11 689
	..... 1997..	18 513
	Indiana 2002..	4 230
	..... 1997..	8 857
	Massachusetts 2002..	7 962
	..... 1997..	12 923
	Michigan..... 2002..	35 354
	..... 1997..	154 008
	Ohio 2002..	59 568
	..... 1997..	141 789
	Pennsylvania..... 2002..	18 231
	..... 1997..	27 582
3335137	Parts for metal forming machine tools (sold separately), including rebuilt and remanufactured metal forming machine tools	
	United States..... 2002..	242 298
	..... 1997..	488 719
	California 2002..	4 232
	..... 1997..	N
	Illinois 2002..	19 326
	..... 1997..	61 998
	Indiana 2002..	12 396
	..... 1997..	8 457
	Michigan..... 2002..	48 773
	..... 1997..	86 303
	New York 2002..	10 225
	..... 1997..	N
	Ohio 2002..	74 961
	..... 1997..	233 695
	Pennsylvania..... 2002..	16 494
	..... 1997..	14 807

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

Table 7. Materials Consumed by Kind: 2002 and 1997

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Material code	Material consumed	Quantity	Delivered cost (\$1,000)
333513	Machine tool (metal forming types) manufacturing		
00900001	Total materials	2002.. X	398 662
		1997.. X	798 675
33399601	Fluid power pumps, motors, and hydrostatic transmissions (hydraulic and pneumatic)	2002.. X	8 036
		1997.. X	25 110
33399501	Fluid power cylinders and rotary actuators (hydraulic and pneumatic)	2002.. X	2 514
		1997.. X	14 030
33399901	Fluid power filters (hydraulic and pneumatic)	2002.. X	392
		1997.. X	2 920
33291203	Fluid power hose and tube fittings and assemblies (hydraulic and pneumatic)	2002.. X	2 962
		1997.. X	8 579
33291207	Fluid power valves (hydraulic and pneumatic)	2002.. X	2 970
		1997.. X	13 634
33272203	Metal bolts, nuts, screws, washers, rivets, and other screw machine products	2002.. X	2 858
		1997.. X	14 402
33200051	Other fabricated metal products (excluding fluid power products and forgings)	2002.. X	16 553
		1997.. X	N
33210000	Forgings	2002.. X	1 763
		1997.. X	N
33151001	Iron and steel castings (rough and semifinished)	2002.. X	10 700
		1997.. X	32 070
33152011	Nonferrous (aluminum, copper, etc.) castings (rough and semifinished)	2002.. X	341
		1997.. X	4 217
33120007	Steel bars, bar shapes, and plate (excluding castings, forgings, and fabricated metal products)	2002.. X	14 375
		1997.. X	69 502
33120016	Steel sheet and strip (including tinplate)	2002.. X	1 359
		1997.. X	N
33120069	Steel structural shapes (excluding castings, forgings, and fabricated metal products)	2002.. X	2 899
		1997.. X	7 271
33120092	All other steel shapes and forms (excluding castings, forgings, and fabricated metal products)	2002.. X	3 676
		1997.. X	N
331000AJ	Nonferrous metal shapes and forms (excluding castings, forgings, and fabricated metal products)	2002.. X	2 935
		1997.. X	3 242
33531209	Fractional horsepower electric timing motors, synchronous and subsynchronous (less than 1 hp)	2002.. X	1 978
		1997.. X	2 112
33531217	Other fractional horsepower electric motors (less than 1 hp)	2002.. X	232
		1997.. X	3 666
33531221	Integral horsepower electric motors and generators (1 hp or more)	2002.. X	2 697
		1997.. X	15 071
001900B1	Electrical transmission, distribution, and control equipment	2002.. X	4 465
		1997.. X	32 233
33500007	Electrical industrial capacitors, resistors, rheostats, and coil windings	2002.. X	863
		1997.. X	6 694
33531409	Numerical controls for metalworking machinery (excluding programmable)	2002.. X	2 027
		1997.. X	13 826
33531411	Programmable controllers for metalworking machinery	2002.. X	6 193
		1997.. X	22 763
001900C4	Printed circuit assemblies, loaded boards, and modules (printed circuit boards with inserted electronic components)	2002.. X	1 036
		1997.. X	N
33441200	Printed circuit boards (without inserted components) for electronic circuitry	2002.. X	325
		1997.. X	N
33441300	Semiconductors (including transistors, diodes, rectifiers, and integrated circuits), for electronic circuitry	2002.. X	552
		1997.. X	N
001900D3	All other miscellaneous components and accessories, for electronic circuitry (excluding tubes)	2002.. X	5 111
		1997.. X	N
33451501	Electrical instrument mechanisms and meter movements (including instrument relays)	2002.. X	1 472
		1997.. X	N
33422001	Electronic communication equipment	2002.. X	144
		1997.. X	N
33331401	Optical instruments and lenses (excluding sighting, tracking, and fire control)	2002.. X	900
		1997.. X	N
33299105	Ball bearings (mounted or unmounted)	2002.. X	2 339
		1997.. X	9 014
33299103	Roller bearings (mounted or unmounted)	2002.. X	2 496
		1997.. X	9 425
33361200	Mechanical speed changers, gears, and industrial high-speed drives	2002.. X	1 797
		1997.. X	15 816
32192001	Wood boxes, pallets, skids, and containers	2002.. X	1 535
		1997.. X	3 851
33351503	Cutting tools for machine tools	2002.. X	2 785
		1997.. X	15 831
32610007	Fabricated plastics products (excluding gaskets, hoses, and belting)	2002.. X	189
		1997.. X	N
32220017	Paper and paperboard containers (including shipping sacks and other paper packaging supplies)	2002.. X	674
		1997.. X	N
00970099	All other materials and components, parts, containers, and supplies	2002.. X	102 820
		1997.. X	285 379
00971000	Materials, ingredients, containers, and supplies, nsk	2002.. X	181 699
		1997.. X	168 017

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.